



**Simposio Internacional: : La biología de las redes proteicas: el interactoma y sus implicaciones patológicas**

*International Symposium: Biology of protein networks: Implications for human disease*

Barcelona, 6 y 7 de octubre de 2015  
*Barcelona, October 6-7, 2015*

**PATRICK ALOY**

Joint IRB-BSC Program in Computational Biology, Institute for Research in Biomedicine (IRB) Barcelona.

Institució Catalana de Recerca i Estudis Avançats (ICREA).

Research in our lab mainly focus on understanding the molecular bases of how macromolecular complexes and cell networks operate by analyzing protein-protein interaction networks with the help of high-resolution 3D structures. Proteins are the main perpetrators of most cellular tasks. However, they seldom act alone and most biological processes are carried out by macromolecular assemblies and regulated through a complex network of protein-protein interactions. Thus, modern molecular and cell biology no longer focus on single macromolecules but now look into complexes, pathways or even entire organism interactomes. The many genome-sequencing initiatives have provided a near complete list of the components present in an organism, and post-genomic projects have aimed to catalog the relationships between them. The emerging field of systems biology is now mainly centered on unraveling these relationships and trying to use the information that they contain to boost novel biomedical applications. Accordingly, in the Structural Bioinformatics & Network Biology group (SB&NB), we have established two interrelated research lines devoted to reveal the molecular bases of how macromolecular complexes and cell networks operate.

<http://sbnb.irbbarcelona.org>